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NEW SPECIES OF FUNGI FROM VARIOUS LOCALITIES.

BY J. B. ELLIS AND B. M. EVERHART.

(Continued from page 46.)

SEPTORIA THALICTRI, E. & E.—On *Thalictrum purpurascens*, Manhattan, Ks., June, 1887. Kellerman & Swingle, No. 1188. Spots amphigenous, scattered, suborbicular, dull purplish-brown, becoming dirty white with a dark margin, 2—4 mm. diam.; perithecia very minute, innate, scattered, pale (about the same color as the dirty white center of the spots) and only seen by holding the leaf between the eye and the light; sporules filiform, continuous, nearly straight, 35—55 x 1—1¼ μ (*). This may be generically connected with *Spherella Thalictri*, E. & E.

PHLEOSPORA CARICIS, E. & E.—On living leaves of *Carex angustata*, Faulkland, Del., October, 1886. A. Commons, No. 446. On round, dirty white spots, 1—2 mm. in diameter, around which the leaf is stained rusty brown; perithecia sunk in the substance of the leaf and visible on both sides, rudimentary, small, black, one or several on a spot; sporules fusoid-oblong, hyaline, 4—7-septate, 40—60 x 12—14 μ. Found also at Columbia, Mo., on leaves of *Cyperus* by Howard Dorsett, No. 24 (in part). In the Missouri specimens, the spots are wanting, the leaf being entirely dead, but there is no other difference. On the same leaves (*Cyperus*) was also found *Septoria lineolata*, Sacc. & Speg., sporules 50—80 x 2 μ, nucleate and finally 4—6-septate. Evidently the same as Saccardo's specimens in M. V., though in his the sporules show no septa. What answers accurately to the description of *Ascochyta teretiuscula*, Sacc. & Roum., also occupied on the same leaves.

CONIOTHYRIUM SALVIICOLUM, E. & E.—On old bleached and decorticated stems of *Salvia officinalis*, Newfield, N. J., May, 1884. Perithecia erumpent-superficial, submembranaceous, black, ½ mm. in diameter, finally collapsing above; ostiolum papilliform; sporules subglobose, olivaceous, 3½—4 μ.

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* An examination of part of original specimens in our possession shows that the spores are mostly 38—48 x 1½—2 and that they are sometimes faintly 1-septate (Kellerman & Swingle).

DOTHIORELLA DECORTICATA, E. & E.—On decorticated wood of poplar, Louisiana. Langlois, Nos., 632, 633 and 639. Perithecia erumpent, depressed above, more or less confluent or connate, forming small (1—2 mm.) subtuberculiform groups thickly scattered over the matrix or scattered singly and partly overrun and fringed with scanty mycelium of brown threads; sporules ovoid with a gelatinous (?) envelope, hyaline, 18—23 x 12—16 μ on stout basidia as long as the spores themselves.

STRUMELLA DEALBATA, E. & E.—On decaying wood, British Columbia. Prof. J. Macoun. Sporodochia occupying bleached areas on the surface of the wood, gregarious, erumpent, olive-black, tuberculiform, mostly flattened above, about 1 mm. in diameter and consisting of a mass of brown, roughish, subglobose conidia 6—8 μ in diameter, subcatenulate or variously attached, the lower ones borne on short rudimentary hyphæ or basidia.

AMEROSPORIUM ILICINUM, E. & E.—On living leaves of *Ilex decidua*, Plaquemines Co., La., June, 1886. Langlois, No. 654. Maculicolous; spots amphigenous, of irregular shape, 2—3 mm. in diameter, definite, mostly with a very narrow slightly raised border, around which is a narrow belt of purplish discoloration, quite thin and finally deciduous, white above, rusty white below; perithecia about 100 μ in diameter, sunk in the substance of the leaf, their bases slightly prominent below, open above with the margin sparsely fringed with short (20 μ), continuous, slightly incurved, black, bristle-like hairs which are finally deciduous when the perithecia seen from above appear like small pale black circles on the surface of the white spot; sporules oblong, 10—15 x 4—5 μ (mostly 12—14 x 4—4½ μ), hyaline, continuous. Accompanied by a *Macrosporium* and *Phyllosticta concomitans*, E. & E., on some of the spots but the *Phyllosticta* and the *Amerosporium* do not usually occur on the same spot.

AMEROSPORIUM MACROCHÆTA, E. & E.—On dead sheaths and leaves of *Rhyncospora macrostachya*, Pointe 'a la Hache, La., December, 1886. Rev. A. B. Langlois, No. 842. Perithecia scattered, superficial, about ⅓ mm. in diameter, hemispheric at first, at length open and shallow cup-shaped, with the margin sparingly fringed with stout, straight, obtuse, olivaceous hairs, continuous or sparingly septate, nearly opaque below, subhyaline or lighter above and 250—300 x 10—12 μ; conidia fusoid, pale olivaceous, 2—3-nucleate, 10—12 x 1½ μ, on slender basidia longer than the conidia.

AMEROSPORIUM SABALINUM, E. & E.—On dead leaves of *Sabal Palmetto*, Louisiana. Langlois, No. 676. Perithecia erumpent-superficial, cupuliform, 100—150 μ in diameter, fringed with a few spreading, straight, brown-black continuous hairs 15—20 x 6—7 μ; sporules fusoid-oblong, yellowish-hyaline, continuous, 5—8 x 1¼—1½ μ.

HARKNESSIA AFFINIS, E. & E.—On dead limbs of *Liquidamber styraciflua*, Plainfield, N. J., July, 1887. Geo. F. Meschutt. Pustules valsoid, multilocular, covered at first with a white disk which is soon perforated in the center and is soon reduced to a white ring around the apex of the pustule; sporules elliptical, opaque, 20—25 x 12—15 μ, with a hyaline pedicel about 25 μ long and mostly enlarged below and an apical, awl-like, hyaline appendage about as long as the pedicel. Distinguished from *H. caudata*, E. & E., principally by its larger sporules.

PESTALOZZIA KALMICOLA, E. & E.—On bleached dead tips of living leaves of *Kalmia latifolia*, Wilmington, Del., April, 1887. A. Commons, No. 481. Perithecia epiphyllous, minute, scattered on or near the living part of the leaf, arranged in subundulate, parallel, transverse lines; conidia pale brown, 4-septate, fusoid, 18—22 x 5—7 μ, with a small, terminal, hyaline cell, bearing three short (5—7 μ), spreading, weak bristles, which, when well developed, are thickened at their tips. The living part of the leaf is separated from the dead by a narrow purplish-red line. This species is allied to *P. decolorata*, Speg., but differs in its shorter, 4-septate conidia with shorter bristles.

PESTALOZZIA ADUSTA, E. & E.—On dead tips and margins of living leaves of cultivated plum trees, Newfield, N. J., July, 1887. Acervuli amphigenous, minute, scattered, prominent, sphæroid or subconic, black; conidia clavate-oblong, 4-septate, 12—15 x 5—6 μ (colored part), the three medial cells pale brown, terminal cells hyaline, the apical one bearing a crest of 2—3 spreading, hyaline bristles 8—12 μ long; the tips and margins of the leaves are of a light gray color and look as if scorched by fire.

PESTALOZZIA DISCOSIOIDES, E. & E.—On living leaves of cultivated roses, Faulkland, Del., August, 1887. A. Commons, No. 611. Maculicolous; spots dirty brown, about 1 cm. in diameter, suborbicular; perithecia epiphyllous, erumpent-superficial, mostly elongated, hysteriiform, ¼—⅓ mm. long; conidia oblong-fusoid, slightly curved, 3-septate, yellowish-hyaline, the intermediate cells only a little darker than the terminal ones, 12—15 x 2½—3 μ, with a short (3—5 μ) oblique bristle at the apex or often arising from one side of the apex; basidia slender, about as long as the conidia. This seems most nearly allied to *P. compta*, Sacc., but is distinct from that species in its subhyaline conidia with much shorter terminal bristle. *P. concentrica*, B. & Rav., and *P. hysteriiformis*, B. & C., which are hardly distinct differ in their larger perithecia and larger conidia, with their intermediate cells brown.

PESTALOZZIA CORNIFOLIA. E. & E.—On living leaves of *Cornus sericea*, St. Gabriel, La., September, 1886. Langlois, No. 506. On round, dusky brown spots 3—4 mm. in diameter, with a narrow, slightly-raised black border or line around which the leaf is slightly tinged with purple; perithecia punctiform, black, smooth, partly prominent, epiphyllous; spores oblong-elliptical, 4-septate, acute below, less distinctly so above and surmounted by a crest of three hyaline, spreading bristles 8—15 μ long. The two terminal cells are hyaline, the others brown, sometimes almost opaque.

GLŒOSPORIUM APOCRYPTUM, E. & E.—On leaves of *Negundo aceroides*, Racine, Wis., July, 1887. Sent also from Kansas by Kell. & Swingle, September, 1887. Acervuli numerous, minute, mostly hypophyllous and on dead areas of the leaf but scattered more or less over the entire leaf. The spores, which are quite variable in size (5—12 x 2½—5 μ, oblong or narrow-elliptical), are discharged so copiously as to whiten the lower surface of the leaf.

GLOEOSPORIUM RUBI, E. & E.—On living leaves of *Rubus villosus* with *Cœoma nitens* (Schw.), Starkville, Miss., April 15, 1888. Prof. S. M. Tracy. Amphigenous on large, indefinite brown spots and areas of the leaf, partly overrun by the *Cœoma;* acervuli numerous, small; conidia oblong, continuous, hyaline, 10—16 x 4 μ, mostly rounded at the ends and straight, but some of them slightly curved and a little narrower at one end.

GLOEOSPORIUM EQUISETI, E. & E.—On living stems of *Equisetum lævigatum*, Braun., Grape Creek, Colo., July, 1887. Rev. C. H. Demetrio, No. 125. Acervuli large (1 mm. in diameter), subconfluent, covered by the blackened cuticle, which soon whitens out except around the margin; spores cylindrical, slightly curved, multinucleate, 25—35 x 3 μ, expelled in pale amber-colored masses.

GLOEOSPORIUM OPUNTIÆ, E. & E.—On dead *Opuntia Brasiliensis*, in a greenhouse, Perryville, Mo., January, 1886. Rev. C. H. Demetrio. Acervuli erumpent, scattered, rather large, at length pale, mass of spores amber-colored; spores oblong, obtuse, continuous, 13—18 x 4—4½ μ. After the disappearance of the spores the raised and ruptured epidermis resembles somewhat an old *Aecidium*.

CYLINDROSPORIUM HERACLEI, E. & E.—On leaves of *Heracleum lanatum* with *Phyllachora Heraclei* (Fr.), Ogden, Utah, August, 1887. Prof. S. M. Tracy. Spots pallid, then brown, subangular, limited by the veinlets but also confluent in irregular, more or less connected brown areas, which often extend along the margins of the leaf, turning it brown; acervuli innate, large, mostly erumpent above in light-colored masses as in *Gloeosporium;* conidia fasciculate, fusoid-cylindrical, granular and nucleate and some of them with the endochrome faintly divided in the middle, attenuated towards each end and strongly curved, 50—60 x 3—4 μ.

CYLINDROSPORIUM GERANII, E. & E.—On living leaves of *Geranium Carolinianum*, St. Martinsville, La., March, 1888. Rev. A. B. Langlois, No. 1157. Spots amphigenous, whitish with a dull reddish border 3—4 cm. across; acervuli minute, abundant, pale, erumpent on both sides of the leaf; conidia slender, 30—50 x 1½—2 μ, continuous, hyaline, arising from short (6—8 μ), subconical basidia (they can hardly be called hyphæ). The erumpent conidia form a white, pulverulent stratum as in the other species.

FUSICLADIUM ALOPECURI, E. & E.—On leaves of *Alopecurus geniculatus*, Columbia, Mo., May, 1887. B. T. Galloway, No. 267. Tufts compact, grayish, thickly scattered over the partly dead tips of the leaves; hyphæ smoky-hyaline, continuous, subtruncate and more or less shouldered and toothed above but otherwise nearly straight; conidia clavate-oblong, olivaceous, granular, continuous or with faint indications of a medial septum, 20—35 x 7—10 μ. Closely allied to *F. fasciculatum*, C. & E., but tufts more compact, hyphæ thicker and straighter and conidia larger; except the habitat, however, there is no serious objection to considering this a mere variety of that species.

FUSICLADIUM ASCYRINUM, E. & E.—On flower bracts and pedicels of *Ascyrum crux Andreæ*, Natchitoches, La., September, 1886. Langlois, No. 705. Hyphæ mostly at the base of the bracts, appearing like patches of black pubescence, which consists of closely crowded fascicles of erect, septate threads about 75 x 4 μ, nearly opaque below, subhyaline above and bearing at their tips the subhyaline, ovate-oblong, 2—3-nucleate, 16—20 x 4—6 μ conidia, either singly or 2—3 standing on the tip of the same thread or often attached to little tooth-like lateral projections near the tip of the thread. Sometimes the conidia are briefly catenulate.

MYSTROSPORIUM ERECTUM, E. & E.—On decaying stalks of *Zea Mays*, Pointe 'a la Hache, La., December, 1886. Rev. A. B. Langlois, No. 862. Forms a thin, continuous, sooty black, granular-looking coat on the matrix and is made up of straight, erect, septate, fuscous, (subhyaline above), fertile hyphæ, 35—40 μ long and 3—4 μ thick, each bearing an erect, terminal, obovate-elliptical conidium, 22—25 x 12—16 μ, nearly opaque and indistinctly cellular. More like the conidia of a *Sporidesmium* in which this might be placed only for the distinct, well developed fertile hyphæ.

SPORIDESMIUM FUMOSUM, E. & E.—On dead twigs of *Quercus alba*, Newfield, N. J., November, 1887. Forming a thin, smoky-black coating on the matrix which is overrun with brown branching toruloid threads whose free ends support the brown, cellular, subglobose, subcatenulate conidia 10—16 μ in diameter, often at first sarcinuliform, *i. e.* divided into four cells by two septa at right angles to each other.

CERCOSPORA LEUCOSTICTA, E. & E.—On leaves of *Melia Azedarach*, St. Martinsville, La., November, 1887. Rev. A. B. Langlois, 792. Spots small (1—2 mm.), white, scattered; hyphæ amphigenous, tufted on a tubercular base, yellowish-brown, continuous or faintly 1—3-septate, 40—50 x 4—5 μ, subundulate and shouldered above, with the obtuse tips often marked with 2 or 3 scars marking the points of attachment of the hyaline, obclavate, 5—10-septate, 60—80 x 3½—4½ μ conidia. Many of the spots are sterile, and on others only a few tufts of 'hyphæ are seen, but on the fertile spots (mostly the larger ones) the tufts are thickly scattered over the spots, except a narrow strip around the margin. This is readily distinguished from the other species on *Melia* by the small white spots.

CERCOSPORA SCUTELLARIÆ, E. & E.—On leaves of *Scutellaria versicolor*, Nutt., Concordia, Mo., October, 1886. Rev. C. H. Demetrio. Amphigenous; spots angular, limited by the veinlets (2—4 mm.), brown below, darker above where the leaf is tinged with purple and yellow; hyphæ forming small compact tufts, continuous, brown, simple, straight, 30—40 x 3 μ; conidia slender, 70—90 x 3 μ, multinucleate and with several indistinct septa.

MONILIA PENICELLATA, E. & E.—On rotten wood, Newfield, N. J. Sent also from Louisiana by Rev. A.B. Langlois (No.782) and from the Adirondack Mts. by Dr. G. A. Rex. Effused or subcæspitose, orange red; sterile hyphæ prostrate, hyaline, overrunning the matrix like the threads of a spider's web and scarcely visible unless considerably magnified; fertile hyphæ erect, stout, simple or branching from the base, 100—200 x 25—40 μ, filled with orange-colored granular matter, not septate, bearing at their obtuse and slightly swollen tips recurved and more or less branching chains of orange-colored, large (25—60 x 20—40 μ) conidia of an acutely-elliptical shape when dry but with the ends obtuse when moist and then readily separating from each other and from the stipe-like base. Often the conidia arise directly from small gangliform thickenings of the prostrate threads and in this case are hardly concatenate or at least in series of only 2 or 3. This differs from the usual type of *Monilia* in its penicillate mode of growth.

ZYGODESMUS MEMBRANACEUS, E. & E.—On rotten wood, Ottawa, Canada. Dr. John Macoun. Light yellowish-white, the color becoming finally a little deeper; hyphæ pale, branching at a right angle or nearly so, 3—5 μ in diameter, with the zygodesmoid joints very distinct, compacted into a loose membrane; spores abundant, subglobose, 3 μ in diameter or subelliptical, 3 x 3½ μ, smooth and nearly hyaline. This species approaches *Corticium* in its submembranous character. It has much the same general appearance as *Corticium echinosporum*, Ell. (N. A. F., No. 608), but that has larger rough spores. It is not *Z. lævisporus*, Ck., for that has spores 10 μ in diameter and is really a *Rhinotrichum* closely allied to *R. Curtisii*, Berk., as near as we can judge from the specimens in Rav. F. Am. The same thing has been found in Florida by Mr. Calkins, No. 821. In old specimens the conidia adhere to each other so as to resemble one large rough spore, but placed in water they soon separate.

VERMICULARIA VELUTINA, E. & E.—On decaying herbaceous stems, St. Martinsville, La., January, 1888. Rev. A. B. Langlois, No. 1113. Densely gregarious; perithecia membranaceous, erumpent, depressed-hemispheric, 70—80 μ in diameter, thickly beset with straight, erect, slaty-black hairs 50—100 x 3—4 μ; sporules slightly arcuate, nearly hyaline, nucleolate, 18—22 x 3—3¼ μ, ends subacute. Recognized by its soft erect hairs, which give the stem a velvety appearance.

STICTIS PARASITICA, E. & E.—On old *Diatrype tremellophora*, Newfield, N. J., October, 1887. Erumpent, minute (one-sixth mm. in diam.), margin dirty white, fimbriate-dentate, expanding tardily; asci clavate-

cylindrical, substipitate, 25—30 x 5—6 μ, with abundant paraphyses; sporidia biseriate, oblong-elliptical, hyaline, continuous, 6—8 x 2½ μ. The stroma of the *Diatrype* and the adjacent bark is beset with erect, opaque, bristle-like hairs 250—300 μ long.

VQLUTELLA CONORUM, E. & E.—On fallen cones of *Magnolia glauca*, Newfield, N. J., August, 1887. Disk sphæroid and milk white at first (¼ mm.), finally plane, sessile, flesh color (½ mm.), surrounded by a fringe of slender (300—400 x 3—4 μ), white, continuous, smooth hairs which are gradually attenuated above; conidia oblong-fusoid, hyaline, continuous, 6—9 x 1½—2 μ, simple; conidia subglobose, hyaline, 1—1¼ μ, on continuous, straight, simple basidia 15—20 x 1—1¼ μ. Differs from *V. fusarioides*, Penzig, in its smaller, straight conidia.

VOLUTELLA CITRINA, E. & E.—On decaying pitchy wood of pine, Newfield, N. J., April, 1888. Sporodochia turbinate-lentiform, sessile, ½—1 mm. in diameter, margin laciniate-toothed, but the teeth not prolonged into hairs, their projecting points barely visible under the lens; basidia 12—15 x 1 μ, abundant. The general appearance is that of a *Helotium*, for which it was at first mistaken.

PEZIZA (CUPULARES) BRACHYPUS, E. & E.—On bare ground among oak bushes, Newfield, N. J., October, 1887. Shallow cup-shaped, regular, 2½ cm. across, pale chestnut color within, white and pruinose outside, stem short-cylindrical, 4 mm. long and thick, white, flesh of cup white, thin and brittle; asci 200 x 15—20 μ, cylindrical; paraphyses stout, thickened above, apices 6—10 μ thick; sporidia uniseriate, elliptical, 18—20 x 12—14 μ, epispore distinctly roughened when mature. Allied to *P. amplispora*, C. & P., but distinguished by its smaller rough sporidia, club-shaped paraphyses and very regular cup not at all rugulose below. The stem, though short, is very distinct and is not enlarged above but cylindrical and smooth (or at least not rugulose or lacunose). The outer cup does not present a smooth continuous membrane but is *innate* tomentose, *i. e.* as if the thin white flesh were composed of tomentum closely compressed and presenting an even though not a strictly continuous surface. The plant shrinks much in drying. There is some resemblance to *P. macropus*, Pers., but that has longer, narrower spores and a longer stem, not to mention other points of difference. Only a single specimen was found.

PEZIZA (DASYSC.) SOLENIÆFORMIS, E. & E.—On decaying wood, Cazenovia, N. Y., October, 1887. Underwood & Cook. Gregarious, brownish, briefly stipitate, hemispheric cup-shaped at first and almost closed by the incurved margin, then expanding to nearly plane, hairy outside and margin fringed with simple, septate, straight white hairs which are mostly a little roughened at the tip; disk dull white, inclining to yellowish or watery flesh color, ½—1 mm across; asci about 40 x 3—3½ μ, clavate-cylindrical, straight and overtopped by the rather obtusely-pointed, stout paraphyses; sporidia subbiseriate, clavate-oblong, hyaline, continuous, 5—8 x 2½ μ (exceptionally 10—12 μ long). The cups appear sessile, but there is a distinct though short stipe just long enough to raise them fairly above the surface of the wood. When dry they are contracted and nearly closed. The marginal hairs are 70—80 μ long and about 3 μ thick and under the microscope are—at least their lower half—yellowish-brown. Substance quite soft. Since found in Ohio by Prof. Morgan.

Peziza (Mollisia) Fairmani, E. & E.—On inner surface of bark lying on the ground, Lyndonville, N. Y., April, 1888. Dr. C. E. Fairman. Centrally attached, sessile, gregarious, concave with the margin subincurved at first, then expanding to plane or slightly convex, ⅓—¾ mm. in diameter; disk livid, margin paler and like the outside of the receptacle clothed with short, hyaline, obtuse, glandular hairs, which become darker and more strongly developed towards the base; asci clavate-cylindrical, sessile, paraphysate, 35—40 x 5—6 μ; sporidia subbiseriate, ovate-elliptical, hyaline, continuous, lower end more acute, 3½—4½ x 2—2½ μ. When dry the disk is nearly closed by the incurved margin.

Peziza (Mollisia) glagosa, E. & E. (Gr., *glagao.*)—On a fallen leaf not much decayed, in the swamp, Newfield, N. J., August 7, 1887. Minute (250—275 μ), round, sessile, smooth, milk white, becoming subrufous or amber color when dry; asci 70—75 x 7—8 μ, gradually attenuated to the base; paraphyses abundant, filiform, not distinctly thickened above; sporidia biseriate or crowded above, oblong or clavate-oblong, mostly a little curved, hyaline, with or without nuclei and some of them showing indications of one or two septa, 80—10 x 2½—3 μ.

Patellaria cenangiicola, E. & E.—Parasitic on *Cenangium turgidum*, Schw., on living *Quercus coccinea*, Newfield, N. J., April 30, 1888. Sessile, subgregarious, patelliform, disk concave (when dry), dull olive green, margin acute, suberect, outside paler, about 1 mm. in diameter (¾—1¼ mm.); asci broad clavate-cylindrical, 75—80 x 12—15 μ; paraphyses indistinct; sporidia crowded, biseriate, subnavicular, clavate-fusoid, nearly hyaline, granular, becoming 1-septate, 30—40 x 7—9 μ.

Helotium lacteum, E. & E.—On dead wood, Cazenovia, N. Y., October, 1887. Prof. L. M. Underwood and O. F. Cook, Jr. Gregarious, stipitate, tomentose, milk white throughout, head plano-convex, subimmarginate, minutely tomentose outside, about ½ mm. across; stem cylindrical, equal, short (150 μ high and thick), tomentose; asci cylindrical-clavate, 75 x 6—7 μ, with linear or filiform paraphyses; sporidia biseriate, fusoid, nucleate, slightly curved, ends acute, 15—17 x 2½—3 μ, hyaline.

Helotium strumosum, E. & E.—On old *Dichæna strumosa*, Fr., Newfield, N. J., December, 1887. Gregarious, sessile, bright lemon yellow, closed and subspherical at first, then open, cup-shaped and finally expanding to nearly plane, one-sixth to one-third mm. in diameter, tomentose-pubescent outside and attached to the matrix by fine white hairs at the base; asci clavate, 70—80 x 10—12 μ, paraphyses stout, yellowish, slightly thickened above; sporidia in the upper part of the asci, biseriate, elliptical or ovate-elliptical, granular and multinucleate at first, then 2—3-nucleate, with indications of a medial septum, 10—12 x 3—4½ μ. Substance soft carnose, margin acute.

Mytilinidion Juniperi, E. & E.—On outer bark of living *Juniperus Virginiana*, Newfield, N. J., April, 1888. Perithecia gregarious, about one mm. long, acute at each end, valves closely compressed and longitudinally striate, subshining; asci about 100 x 7 μ, cylindrical, surrounded by abundant paraphyses; sporidia 1-seriate, oblong, brown, 3-septate, 12—15 x 4—5 μ.

Nectria polythalama, Berk.—Specimens of this species have been found by Mr. Commons, in Delaware, on dead hickory limbs agreeing with the specimens in Rav. Car. except in the asci being 100—110 x 15 μ and sporidia 20—30 x 7—12 μ. The perithecia also are a little larger (½—¾ mm.) and only slightly collapsed. They burst through cracks in the bark in clusters of 3—30 and are of a dull red color, dusted with a yellowish powder. Ostiolum papilliform, blackish.

Nectria Missouriensis, E. & E.—On bark of dead *Carya alba*, near Concordia, Mo., March, 1888. Rev. C. H. Demetrio, No. 87. Perithecia cæspitose (6—20), on a small stromatic base, dark red, globose (¼—⅓ mm.) furfuraceous, with a strongly papilliform ostiolum; asci 100—120 x 15—20 μ, with abundant filiform, evanescent paraphyses; sporidia irregularly crowded, oblong-elliptical, straight or very slightly bulging on one side, yellowish-hyaline, muriform, 20—25 x 10—12 μ, ends subacute.

Dialonectria perforata, Ell. & Holw., in Geol. and Nat. Hist. Survey of Minn., Bull. No. 3, p. 33.—On a decaying *Agaricus*. Perithecia gregarious and subconfluent, one-sixth to one-fifth mm. in diameter, rough and pruinose-furfuraceous, pale at first, becoming orange-red, depressed-globose, ostiolum papilliform and collapsing when dry, so as to appear broadly perforated above; asci clavate-cylindrical, 75 x 7—8 μ, without paraphyses; sporidia obliquely uniseriate, elliptical or subovate, uniseptate, hyaline or with a faint tinge of rose color, 8—12 x 5—6 μ. This comes very near *N. vulpina*, Cke., and possibly may not be specifically distinct.

Dialonectria sulfurea, Ell. & Calkins.—Parasitic on old *Stereum rugosum*, Fr., near Jacksonville, Fla., January, 1886. W. W. Calkins, No. 816. Scattered on a thin farinose-tomentose, yellow subiculum extending for one or more cm.; perithecia ovate-conic, pruinose, yellow (nearly sulphur yellow), with a papillose ostiolum, one-eighth to one-sixth mm. in diameter. In the specimens thus far seen, the asci had disappeared, but there was an abundance of oblong or clavate-oblong, hyaline, 1-septate, 7—12 (mostly 8—9) x 2½—3½ μ sporidia, distinctly constricted at the septum, ends rounded or obtusely pointed.

HYPOCREA BICOLOR, E. & E.—On decaying log of *Ulmus fulva*, Manhattan, Ks., Jan., 1888. Kellerman & Swingle, No. 1160. Stromata gregarious or crowded, convex, suborbicular, dull cinereous becoming dull black, suborbicular, 2—4 mm. in diameter, surface mostly rugulose, centrally attached as in *H. Schweinitzii*, Fr., which when mature it much resembles; perithecia peripheric, globose, about ⅛ mm. in diameter, buried in the stroma, which is of a dull white color within and has the surface minutely roughened by the punctiform ostiola; asci cylindrical, 70 x 5 μ; sporidia 1-seriate or crowded above, elliptical, continuous, smoky-brown, about 5 x 2½ μ.

SPHÆROTHECA LEUCOTRICHA, E. & E.—On living twigs, Concordia, Mo., December, 1887. Rev. C. H. Demetrio. Mycelium white, thin, submembranaceous, persistent, composed of imperfectly developed, hyaline, branching threads and granular matter and bearing more or less abundantly pale-brown, elliptical. 1-septate conidia 5—8 x 4—5 μ; perithecia minute (75—80 μ), immersed in the mycelium; appendages mostly rudimentary or obsolete but sometimes well developed, 50—100 μ long, brown, paler towards the extremities; asci obovate, 75—80 x 50—60 μ; 8-spored; sporidia elliptical, subinæquilateral, granular, 22—30 x 12—15 μ. Readily distinguished by its thin, white, persistent, granular mycelium.

VALSA PALLIDA, E. & E.—On bark of dead *Salix*. South Butler, N. Y., December, 1887. O. F. Cook, Jr. Stromata subhemispherical and suborbicular, composed of the substance of the inner bark, which is changed to a dirty flesh color or dirty white, about 2 mm. in diameter and surrounded by a thin black wall which shows as a black circumscribing line on a horizontal section, closely aggregated and occupying extensive areas which are definitely limited, presenting much the same general appearance as *V. ambiens;* perithecia 4—8 in a stroma, rather small, with slender necks that barely pierce the dirty white, farinaceous disk with their broad, depressed-hemispheric, roughish, black and, when well developed, distinctly quadrisulcate-cleft ostiola; asci (p. sp.) 35—45 x 6—7 μ; sporidia biseriate, quite hyaline, slightly curved, continuous, 6—8 x 1½—2 μ. The disk containing the ostiola is closely embraced by the cuticle which is perforated but not laciniately cleft and is raised into rather broad pustules by the underlying stroma. *V. verrucula*, Nits., seems to differ in its elongated ostiola and numerous perithecia.

FENESTELLA AMORPHA, E. & E.—On (decorticated [?]) hickory limb, Lyndonville, N. Y., March, 1888. Dr. Chas. E. Fairman Perithecia flask-shaped, about 1 mm. high and ¾ mm. broad, black outside but the internal texture white, connate and subseriate, the short (½ mm.), cylindrical ostiola converging but not united in a disk; asci cylindrical, with a narrow base, 150—175 x 12—15 μ, with abundant filiform paraphyses; sporidia 1-seriate, oblong-elliptical, about 6-septate with a single longitudinal septum, dark brown, 20—25 x 10—12 μ; not constricted at the septa. The specimens examined were apparently superficial, but it is probable that the fungus grew while the limb was still invested with the bark through longitudinal cracks in which the ostiola penetrated.

(To be continued.)

NEW LITERATURE.

BY W. A. KELLERMAN.

"Fourteenth Annual Report of the New York State Museum of Natural History, for the year 1886." Report of the botanist. Chas. H. Peck, pp. 37-77.

The following new species are described: Collybia fuliginella, Peck; Clitopilus subvilis, Peck; Polyporus radiculosus, Peck; Hydnum subfuscum, Peck; H. carbonarium, Peck; Irpex ambiguus, Peck; Porothelium pupillatum, Peck; Hymenochæte tenuis, Peck; Phyllosticta Lycopersici, Peck, on L. esculentum; P. Caryæ, Peck, on C. alba; P. tumoricola, Peck, on Quercus alba; P. populina, Sacc., var. parva, Peck, on P. monilifera; P. spermoides, Peck, on Vitis riparia; P. faginea, Peck, on Fagus ferruginea; P. vagans, Peck, on Smilacina racemosa; P. fatiscens, Peck, on Nuphar advena; Phoma magnifructa, Peck, on Thuja occidentalis; P. Populi, Peck, on P. tremuloides; P. castanea, Peck, on C. vesca; Cytospora grandis, Peck, on dead bark of Rhus typhina; Haplosporella Pini, Peck, on dead bark of white pine; Diplodia Asparagi, Peck, on dead stems of asparagus; Staganospora Chenopodii, Peck, on Chenopodiumalbum; Septoria fusca, Peck, on Artemisia vulgaris; S. solidaginicola, Peck, on S. arguta; S. brevis, Peck, on Solidago Virgaurea, var. alpina; S. populicola, Peck, on P. balsamifera; Pilidium graminicola, Peck, on Calamagroutis Canadensis; Melanconium dimorphum, Peck, on Alnus viridis; Corynemum tumoricola, Peck, on Ulmus Americana; Ramularia Barbareæ, Peck, on B. vulgaris; Cladosporium brevipes, Peck, on living leaves of Quercus alba; Graphium Sorbi, Peck, on Pyrus Americana; Helotium episphæricum, Peck, on old Hypoxylon Morsei; Ascomyces letifer, Peck, on Acer spicatum; A. rubrobrunneus, Peck, on Quercus rubra; Valsa Thujæ, Peck, on T. occidentalis; Anthostoma Ellissii, Sacc., var. exudans, Peck, on dead bark of Alnus incana; Sphærella minutissima, Peck, on Alnus incana; S. alnicola, Peck, on A. viridis; S. Pontederiæ, Peck, on P. cordata; Diaporthe (Chorostate) farinosa, Peck, on Tilia Americana; Leptosphæria Asparagi, Peck, on asparagus; Pleospora Shepherdiæ, Peck, on S. Canadensis; Dothidella Alni, Peck, on A. viridis; Lophiotrema vestita, Peck. on Populus tremuloides and L. parasitica, Peck, on Hypoxylon Morsei.

"Puccinia mirabilissima," Tracy & Galloway. Botanical Gazette, May, 1888.

"Plant Diseases—Ustilago segetum in Oats and Barley." J. L. Jensen. The Gardener's Chronicle, May, 5, 1888.